

REMARKS**INTRODUCTION:**

In accordance with the foregoing, claim 2 has been canceled without prejudice or disclaimer, and claims 1, 3, 4, 5, 8, 13, 22 and 24 have been amended. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1, 3-9, 11-16, and 21-24 are pending and under consideration. Reconsideration is respectfully requested.

CORRECTION OF CLAIM 9 IN RESPONSE TO NON-COMPLIANT AMENDMENT:

Applicants thank the Examiner for pointing out the inadvertent error in claim 9. Claim 9 has been corrected to show that it was previously presented.

RESPONSE TO COMMENTS IN ADVISORY ACTION - addressed at the beginning to clarify understanding of the amendments submitted herein:

In the Advisory Action, at page 2, numbered paragraph 1, the Examiner submitted that the proposed amendment raises numerous new issues.

With respect to the (1), the change in the Bragg angle range, of $(2\theta \pm 0.2) = 9.5^\circ$ to 27.3° to $-(2\theta \pm 0.2) = 9.5^\circ$ to 27.1° , it is respectfully submitted that the court has held that applicants are permitted to narrow the claim. In Ex Parte Williams and Neal, 39 USPQ 125 (1938) at pages 126-127, the court held that a negative expression in a chemical claim, while expressed in terms not found in the original disclosure is not objectionable as eliminating from scope certain materials which may possibly have been included in the original disclosure since the limitation has a narrowing effect rather than a broadening one. Thus, the court held that such a limitation was permissible.

With respect to (2), the phrase "using a dispersing machine" is based on the specification, for example, paragraph [0028]:

[0028] In an embodiment of the present invention, the Y-form titanyloxy phthalocyanine is dispersed for more than 1 hour with a dispersing machine, with the addition of a binder resin and a solvent and a dispersing material selected from glass beads, steel beads, zirconia beads, alumina beads, zirconia balls or steel balls. Here, the dispersing machine may be a high-speed agitator, a paint shaker, a ball mill, a sand mill, a dyno mill, a two roll mill, a three roll mill, a supersonic pulverizer, a ultimizer, etc. Finally, the dispersion liquid can be obtained by straining out the beads used for the milling through a sieve. (emphasis added)

With respect to (3), the terminology "the single layered electrophotographic photoreceptor exhibits an $E_{1/2}$ of about 0.16 to 0.22 $\mu\text{Joules}/\text{cm}^2$...", Table 1, page 11 of the

specification, illustrates the range of values recited. With respect to the Examiner's concerns about the cited examples of single-layered photoreceptors having values of $E_{1/2}$ 0.169...0.271 $\mu\text{joules}/\text{cm}^2$, it is respectfully submitted that the court has held:

If lack of literal support alone were enough to support a rejection under § 112, then the statement of In re Lukach . . . that "the invention claimed does not have to be described in ipso verbiis in order to satisfy the description requirement of § 112," is empty verbiage.

Wertheim, 541 F.2d at 265. In Wertheim the claims discussed covered a range ("solids level of at least 35%"), id. at 258, whereas the specification disclosed a broader range ("concentrated . . . until a concentration of 25 to 60% solid matter is reached"), id. at 262 (internal quotation marks omitted). In Wertheim the CCPA held that the specification supported the claimed range, even though the precise range of the claim was not repeated verbatim in the specification. In so holding, the court cautioned that it would "let form triumph over substance" if it allowed the written description requirement to eviscerate claims that are narrowed during prosecution, simply because the patent applicant broadly disclosed in the original patent application but then narrowed his claims during prosecution. See id. at 263. Additionally, Wertheim reiterates the often cited rule that written description questions are intensely factual, and should be dealt with on a case-by-case basis, without the application of wooden rules. See id. at 262.

Thus, it is respectfully submitted that the samples shown in Table 1 of the specification clearly indicate that the claimed invention has a specific $E_{1/2}$ value range. It is submitted that it is not necessary to provide examples for every possible $E_{1/2}$ value in the range because such a requirement would be unduly limiting.

With respect to claims 1, 5 and 13, the terminology with respect to the substrate has been retained as "electrically conductive substrate" in accordance with allowed claims 9 and 15 (see below), and claims 1, 5 and 13 are now submitted to be in allowable form.

Thus, it is respectfully submitted that the concerns of the Examiner with respect to the cited issues has been addressed.

EXAMINER'S COMMENTS (Paragraph 20 of Office Action - addressed first to clarify understanding of further arguments below):

In the Office Action, at pages 29-32, numbered paragraph 20, the Examiner commented on Applicants' arguments filed on April 28, 2005. A response to same is included below.

The Examiner notes that Applicants submitted that Yokota and Line are not prior art because Applicants have perfected their claim to foreign priority by filing the English-language translation of the priority document, Korea 2002-40105, on April 28, 2005. However, the

Examiner submits that a certification statement was not filed therefor in compliance with 37 CFR 1.55(a)(4).

It should be noted that, as indicated on the receipt postcard stamped by the USPTO, a copy of which is included herewith for the convenience of the Examiner, a certification statement was filed with the English Translation of Korean Application No. 2002-40105. Enclosed herewith, for the convenience of the Examiner is another copy of the certification statement together with the English Translation of Korean Application No. 2002-40105.

The Examiner points out that, under 37 CFR 1.55(a)(4), the English translation must be filed with a statement that the translation of the certified copy (of the non-English priority document, the foreign application) is accurate. It is respectfully submitted that the certified copy submitted herewith is accompanied by a certification statement which states that the translation of the certified copy of Korean Patent Application No. 2002-40105 is "correct." Enclosed herewith is the statement of Merriam -Webster Online (a copy of which is included herewith for the Examiner's convenience) that "accurate" is a synonym for the term "correct." Hence, it is respectfully submitted that the certification statement for the certified copy of Korean Patent Application No. 2002-40105 is in accordance with the requirements of 37 CFR 1.55(a)(4).

Thus, it is respectfully submitted that the submission of the certified translation and the certification statement were made timely and correctly, and that, as such, Yokota and Lin do not qualify as prior art, as set out more fully below:

By submission of the Certified Translation, an English translation of Korean Application No. 2001-56438, filed September 13, 2001, it is respectfully requested that the applicants be given the benefit of the foreign filing date of at least July 10, 2002, in accordance with the requirements of 35 U.S.C. §119 and MPEP 210.15.

Hence, since the pending claims at least have the benefit of the filing date of July 10, 2002, and the U.S. filing date of Yokota (US 2004/0009419; hereafter, Yokota) is June 12, 2003, Yokota is removed as a reference under 35 U.S.C. §102(e) and under 35 U.S.C. §103(a).

Support for the pending claims is at least disclosed in Korean Application No. 2001-56438.

Similarly, since the pending claims at least have the benefit of the filing date of July 10, 2002, and the U.S. filing date of Lin (2004/0096761; hereafter, Lin) is November 20, 2002, Lin is removed as a reference under 35 U.S.C. §102(e) and under 35 U.S.C. §103(a). It is respectfully submitted that the inventive entity in Lin is not relevant to the consideration of the benefit of the earlier filing date of the foreign application of the present invention under 35 U.S.C. §119.

Support for the pending claims is at least disclosed in Korean Application No. 2001-56438.

Hence, it is respectfully submitted that Yokota (US 2004/0009419) and Lin (2004/0096761) are not prior art with respect to the subject matter recited in the instant claims.

The Examiner submits that the English-language translation does not broadly recite the use of "dispersion materials," broadly recited in claims instant claims 1, 5, 9, 13 and 15, and submits that only six specific materials are recited as dispersion materials in the translation. For clarity, claims 1, 5 and 13 have been amended to change "using dispersion materials" to --using a dispersion machine---, which is clearly broadly recited in line 6 of page 14 of the translation. Since claims 9 and 15 are allowable over the prior art of record, claims 9 and 15 have not been amended.

The Examiner submits that the English-language translation does not disclose the "electrically substrate of a drum" or the "electrically conductive substrate of a cartridge," broadly recited in instant claims 1, 5, 9, 13 and 15. It is respectfully submitted that lines 1-6 of page 15 of the translation recite "... by coating the dispersion coating liquid on the substrate, for example, on the aluminum drum....As these are described by way of an example, this should not be considered as limiting" (emphasis added). Hence, it is respectfully submitted that the substrate is not limited to being on a particular cartridge or drum or aluminum drum. Claims 1, 5 and 13 recite an "electrically conductive substrate" in correspondence with claims 9 and 15, which are allowable over the prior art of record, and are submitted to be in allowable form with respect to the terminology of the substrate for at least the reasons that the terminology of claims 9 and 15 with respect to the substrate is allowable.

Claim 2 has been cancelled. Thus, the Examiner's concern that claim 2 is a product-by-process claim is now moot.

With respect to claims 1 and 3-8, which the Examiner submits are product by process claims and submits that said claims are rejected in view of a plurality of cited prior art, in view of the above submission that Yokota and Lin do not qualify as prior art, the individual rejections in the present Office Action are addressed below.

CHANGES TO THE SPECIFICATION:

In the Office Action, paragraph 5, page 6, the substitute specification filed on April 28, 2005 was objected to under 35 U.S.C. 132(a). The Examiner stated that the added material in paragraphs [0018], [0029], and [0033] was not supported by the original disclosure and that "phthalocyan" in paragraph [0025] was misspelled.

Paragraphs [0018], [0029], and [0033] have been amended to change "aminostyrene polymer" to ---enamine stilbene polymer---. No new matter has been added.

Paragraph 25 has been amended to change "phthalocyan" to recite --- phthalocyanine---.

Thus, amended paragraphs [0018], [0025], [0029], and [0033] and the thus amended substitute specification are submitted to be in allowable form under 35 U.S.C. 132(a).

REJECTION UNDER 35 U.S.C. §112:

In the Office Action, at pages 7-11, numbered paragraph 8, claims 1-8, 13, 14, 21 and 22 were rejected under 35 U.S.C. §112, second paragraph, for the reasons set forth therein. This rejection is traversed and reconsideration is requested.

Claim 1 has been amended to recite, in part: "dissolving, in a predetermined solvent, the charge transfer material comprising a positive hole transfer material, ~~the an~~ an electron transfer material and a second binder resin to obtain a dissolved charge transfer material." Thus, claim 1, and claims dependent thereon, are now submitted to be definite under 35 U.S.C. §112, second paragraph.

Claim 5 has been amended to recite, in part: "A single-layered electrophotographic photoreceptor ~~having comprising~~ a charge generating material, wherein the single-layered electrophotographic photoreceptor is prepared by: ~~prepared by a process of manufacturing a single-layered electrophotographic photoreceptor, the process comprising:~~."

Claim 5 has also been amended to recite, in part: "wherein the ~~charge generating material is included in a dispersion liquid, the dispersion liquid including the charge transfer material, predetermined solvent is~~ 1,1,2-trichloroethane as a solvent, and polycarbonate as is the second binder resin."

Thus, claim 5, and claims dependent thereon, are now submitted to be definite under 35 U.S.C. §112, second paragraph.

With respect to claims 6 and 14, it is respectfully submitted that, as is known to those skilled in the art, and as noted in the response filed June 23, 2005 (see reference cited in said response), weight% refers to percent by mass, i.e., (mass of a component/mass of solution) x 100%, and hence, it is respectfully submitted that definition of "weight%" is not required in the specification or claims because the meaning of "weight%" is clearly known to those skilled in the art. However, for clarity, claims 6 and 14 have been cancelled.

Claim 8 has been amended to recite, in part: "the first binder resin," and is now submitted to be definite.

Amended claim 13 clearly recites that a predetermined solvent and a second binder resin are utilized. Thus, the amendment to claim 13 simply specifies that 1,1,2-trichloroethane is included as the predetermined solvent and that polycarbonate is included as the second binder

resin. Hence, amended claim 13 is now submitted to be definite.

Claims 9-18, as filed, have been copied into the specification as paragraphs [0060]-[0061] and original paragraph [0060] has been renumbered as paragraph [0062]. Claims 6 and 14 have been cancelled without prejudice or disclaimer. Thus claims 9-13 and 15-18 are now submitted to be in allowable form and an adequate written description of the first binder resin is submitted to be present in the specification. Hence, claims 9-13 and 15-18 are submitted to be allowable under 35 U.S.C. § 112, first paragraph.

With respect to claim 16, it is respectfully submitted that lines 10-11 of page 11 of the translation recite: "Alternatively, the binder resin can be the mixture of polycarbonate and polyethylene terephthalate polymer mixed with 1:99 to 99:1 in the weight rate." Hence, it is submitted that claim 16 is supported by the translation.

Claim 1 has been amended to correct "the dissolved the charge transfer material" to recite ---the dissolved the charge transfer material---, and is now submitted to be in correct form.

Claims 22 and 24 has bee amended to correct the spelling of "dicyanomethylene" to ---~~dicyanomethylene~~ dicyanomethylene---, and are now submitted to be in correct form.

Claim 2 has been cancelled. Hence, the objection to claim 2 is now moot.

REJECTION UNDER 35 U.S.C. §102 and/or §103:

A. In the Office Action, at pages 14-16, numbered paragraph 15, claims 1 and 2 were rejected under 35 U.S.C. §102(e) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being obvious over Yokota (US 2004/0009419; hereafter, Yokota), as evidenced by ACS File Registry RN 26201-32-1 and Japanese Patent 01-299874 (JP '874). This rejection is traversed and reconsideration is requested.

Claim 2 has been cancelled without prejudice or disclaimer. Thus, the rejection of claim 2 under 35 U.S.C. §102(e) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being obvious over Yokota (US 2004/0009419), as evidenced by ACS File Registry RN 26201-32-1 and Japanese Patent 01-299874 (JP '874) is now moot.

It is respectfully submitted that there is no teaching or suggestion of combining the cited art. **"Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight."** (emphasis added) Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617. It is respectfully submitted that combining the references cited by the Examiner is impermissible hindsight.

Applicants again respectfully submit, as in the Amendment/Response filed on June 23, 2005, that the English translation of Korean Application No. 2002-40105, filed therewith, along with a corresponding certification statement in compliance with 37 CFR 1.55(a)(4) (a copy of which documents is included herewith), has established a date of invention of at least July 10, 2002 under 35 USC §119 and MPEP 210.15 (see above). Since this date of invention is prior to the publication of Yokota on January 15, 2002, Yokota does not qualify as prior art under 35 U.S.C. §102(e).

Claim 1 has been amended to recite, in part: "wherein the single-layered electrophotographic photoreceptor exhibits an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, wherein $E_{1/2}$ is an exposure quantity necessary for discharging 1/2 of V_o , an initial potential."

Although the Examiner submits that it is well known in the art that the titanyl phthalocyanine (TiOPc) has the chemical structure as recited in the instant claims and that γ -titanyl phthalocyanine provides an CuK α X-ray diffraction pattern having peaks at the Bragg angles $2\theta \pm 0.2^\circ$ of 17.7° , 24.0° , and 27.2° , it is respectfully submitted that the single-layered electrophotographic photoreceptor of claim 1, as amended, is not well known or recited by the prior art.

As noted by the Examiner on page 36 of the Office Action, the prior art does not teach a photoreceptor of the present invention which requires the use of 1,1,2-trichloroethane. As noted above, claim 1 provides a product "wherein the single-layered electrophotographic photoreceptor exhibits an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, wherein $E_{1/2}$ is an exposure quantity necessary for discharging 1/2 of V_o , an initial potential." It is respectfully submitted that Yokota is not available as prior art and JP '874 does not provide a product exhibiting an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, wherein $E_{1/2}$ is an exposure quantity necessary for discharging 1/2 of V_o , an initial potential, as is provided by claims 1 and 5 of the present invention.

Since JP '874 does not recite, teach or suggest claim 1 of the present invention, claim 1 of the present invention is submitted not to be anticipated under 35 U.S.C. §102(e) and to be patentable under 35 U.S.C. §103(a) over Japanese Patent 01-299874 (JP '874).

Therefore, it is respectfully requested that the Examiner reconsider and withdraw the rejection of claim 1 in view of Yokota. For the convenience of the Examiner, a copy of the English translation of Korean Application No. 2002-40105, filed therewith, along with a corresponding certification statement in compliance with 37 CFR 1.55(a)(4) is included herewith.

In addition, since Yokota is not available as prior art under 35 U.S.C. §102(e), Yokota is not available as prior art under 35 U.S.C. §103(a), and since the citations of ACS File Registry RN 26201-32-1 and Japanese Patent 01-299874 (JP '874) are only definitional references, the

citations of ACS File Registry RN 26201-32-1 and Japanese Patent 01-299874 (JP '874) are not relevant prior art since Yokota does not qualify as prior art.

Thus, claim 1 is submitted not to be anticipated under 35 U.S.C. §102(e) by, and to be patentable under 35 U.S.C. §103(a) over, Yokota (US 2004/0009419 by US 2004/0009419 A1 (Yokota), and/or ACS File Registry RN 26201-32-1, and/or Japanese Patent 01-299874 (JP '874), and/or the USPTO translation of JP '874.

B. In the Office Action, at pages 16-18, numbered paragraph 16, claims 1, 2, and 5-8 were rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being obvious over Japanese Patent 10-020515 (JP '515), as evidenced by the ACS File Registry Number RN 26201-32-1 and Japanese Patent 61-271050 (JP '050). This rejection is traversed and reconsideration is requested.

Claim 2 has been cancelled. Thus, the rejection of claim 2 under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being obvious over Japanese Patent 10-020515 (JP '515), as evidenced by the ACS File Registry Number RN 26201-32-1 and Japanese Patent 61-271050 (JP '050) is now moot.

It is respectfully submitted that there is no teaching or suggestion of combining the cited art. **"Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight."** (emphasis added) Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617. It is respectfully submitted that combining the references cited by the Examiner is impermissible hindsight.

Claims 1 and 5 have been amended to recite, in part: "wherein the single-layered electrophotographic photoreceptor exhibits an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, wherein $E_{1/2}$ is an exposure quantity necessary for discharging 1/2 of V_o , an initial potential."

Although the Examiner submits that is well known in the art that titanyl phthalocyanine (TiOPc) has the chemical structure recited in the instant claims and that alpha titanyl phthalocyanine provides an $\text{CuK}\alpha$ X-ray diffraction pattern having peaks at the Bragg angles $2\theta \pm 0.2^\circ$ of 12.3° , 16.3° , and 23.3° , it is respectfully submitted that the single-layered electrophotographic photoreceptors of claims 1 and 5, as amended, are not well known or recited by the cited art.

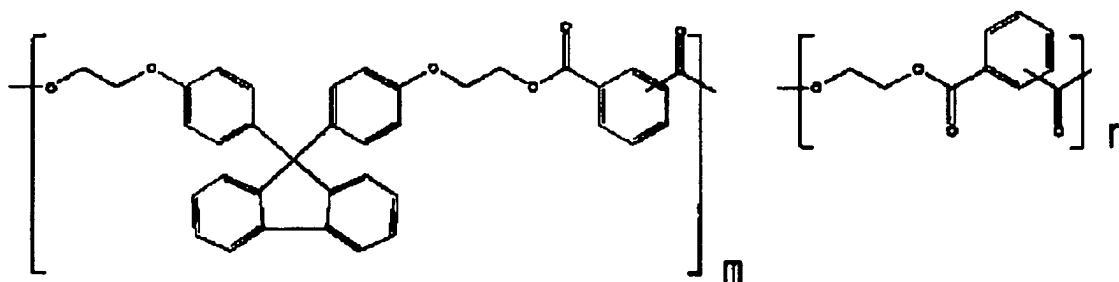
As noted by the Examiner on page 36 of the Office Action, the prior art does not teach a photoreceptor of the present invention which requires the use of 1,1,2-trichloroethane. As noted above, claims 1 and 5 provide a product "wherein the single-layered electrophotographic photoreceptor exhibits an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, wherein $E_{1/2}$ is an

exposure quantity necessary for discharging 1/2 of V_o , an initial potential." It is respectfully submitted that neither JP '509, nor JP '050 nor JP '515, alone or in combination provide a product exhibiting an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, wherein $E_{1/2}$ is an exposure quantity necessary for discharging 1/2 of V_o , an initial potential, as is provided by claims 1 and 5 of the present invention.

Anticipation requires that every element of an invention be found in a single reference. As noted by the Examiner, JP '515 does not disclose that the alpha titanyl phthalocyanine has at least 2 main peaks at Bragg angles in the range of 9.5° to 27.3° , as was recited in independent claims 1 and 5. Claims 1 and 5 have been amended to recite "in the range of 9.5° to 27.1° ," and are now submitted to recite a different range that is not taught or suggested by JP '515. It is respectfully submitted that the characteristics of the present invention cannot be simply attributed to JP '515 when such a description is not included therein.

Hence, since an application is anticipated only if a single prior art reference discloses each and every limitation of the claimed invention, it is respectfully submitted that amended independent claims 1 and 5 are not anticipated under 35 U.S.C. §102(b) by JP '515. Claim 6 has been cancelled. Hence, since claims 7-8 depend from claims 1 and 5, it is respectfully submitted that claims 7-8 are not anticipated under 35 U.S.C. §102(b) by JP '515 for at least the reasons that claims 1 and 5 are not anticipated under 35 U.S.C. §102(b) by JP '515.

Similarly, JP '050 fails to teach using the binder resin is a polyethylene terephthalate polymer which has a following formula;



with n and m each being an integer that is equal to, or greater than, 1, which is recited in independent claims 1 and 9 of the present claimed invention.

Thus, independent claims 1 and 5 are not anticipated under 35 U.S.C. §102(b) by JP '050. Claim 6 has been cancelled. Since claims 7-8 depend from independent claims 1 and 5, respectively, claims 7-8 are submitted not to be anticipated under 35 U.S.C. §102(b) by JP '050 for at least the reasons that claims 1 and 5 are submitted not to be anticipated under 35 U.S.C. §102(b) by JP '050.

In response to the rejection of claims 1 and 5 under 35 U.S.C. §103(a) and the Examiner's concerns about the product by process claims, in accordance with Table 1 of the

translation, the terminology "wherein the single-layered electrophotographic photoreceptor exhibits an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, wherein $E_{1/2}$ is an exposure quantity necessary for discharging 1/2 of V_o , an initial potential" has been added to claims 1 and 5 to show that the product by process claims 1 and 5 provide a product that has an improved $E_{1/2}$, in comparison with other single-layered electrophotographic photoreceptors (see Table 1). It is respectfully submitted that the use of 1,1,2-trichloroethane in the present invention provides a product with different characteristics than the cited art. Hence, it is respectfully submitted that the compositional limitations of the cited art are different from the compositional limitations of the present claimed invention.

Hence, it is respectfully submitted that the single-layered electrophotographic photoreceptors of claims 1 and 5 are not taught or suggested by JP '515 and/or JP '050, and thus are patentable under 35 U.S.C. §103(a) over Japanese Patent 10-020515 (JP '515), as evidenced by the ACS File Registry Number RN 26201-32-1 and Japanese Patent 61-271050 (JP '050). Claim 6 has been cancelled. Since claims 7-8 depend from claims 1 and 5, claims 7-8 are submitted to be patentable under 35 U.S.C. §103(a) over Japanese Patent 10-020515 (JP '515), as evidenced by the ACS File Registry Number RN 26201-32-1 and Japanese Patent 61-271050 (JP '050) for at least the reasons that claims 1 and 5 are submitted to be patentable under 35 U.S.C. §103(a) over Japanese Patent 10-020515 (JP '515), as evidenced by the ACS File Registry Number RN 26201-32-1 and Japanese Patent 61-271050 (JP '050).

REJECTION UNDER 35 U.S.C. §103:

A. In the Office Action, at pages 18-22, numbered paragraph 17, claims 1, 2, 4, 5, 7, and 8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent 2000-075509 (JP '509) as evidenced by ACS File Registry RN 26201-32-1 and JP '050, combined with JP '515. This rejection is traversed and reconsideration is requested.

Claim 2 has been cancelled. Hence, the rejection of claim 2 under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent 2000-075509 (JP '509) as evidenced by ACS File Registry RN 26201-32-1 and JP '050, combined with JP '515 is now moot.

Claims 1 and 5 have been amended to recite, in part: "wherein the single-layered electrophotographic photoreceptor exhibits an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, wherein $E_{1/2}$ is an exposure quantity necessary for discharging 1/2 of V_o , an initial potential."

Although the Examiner submitted that it is well-known in the art that the alpha titanyl phthalocyanine has the chemical structure and the X-ray diffraction pattern as recited in the instant claims, claims 1 and 5 have been amended, and it is respectfully submitted that the single-layered electrophotographic photoreceptors of claims 1 and 5, as amended, are not well

known or recited by the cited art. JP '515 does not meet the compositional limitations of amended claims 1 and 5, and since claims 7 and 8 depend from amended claims 1 and 5, respectively, JP '515 does not meet the compositional limitations of claims 7 and 8.

As noted by the Examiner on page 36 of the Office Action, the prior art does not teach a photoreceptor of the present invention which requires the use of 1,1,2-trichloroethane. As noted above, claims 1 and 5 provide a product "wherein the single-layered electrophotographic photoreceptor exhibits an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, wherein $E_{1/2}$ is an exposure quantity necessary for discharging 1/2 of V_o , an initial potential." It is respectfully submitted that neither JP '509, nor JP '050 nor JP '515, alone or in combination provide a product exhibiting an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, wherein $E_{1/2}$ is an exposure quantity necessary for discharging 1/2 of V_o , an initial potential, as is provided by claims 1 and 5 of the present invention.

It is respectfully submitted that, in In re Dembiczak, the court noted that:

Measuring a claimed invention against the standard established by section 103 requires the oft-difficult but critical step of casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field.

In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). One "cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." (emphasis added) In re Fine, 837 F.2d 1071, 1075, 5 USPQ2d 1780, 1783 (Fed. Cir. 1988).

"Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight." (emphasis added) Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617. It is respectfully submitted that there is no teaching or suggestion of combining the references cited by the Examiner.

In the present instance, even if combined, the cited art does not provide the single-layered electrophotographic photoreceptor that exhibits an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$ that is recited in amended claims 1 and 5 of the present invention.

Hence, claims 1 and 5 are submitted to be patentable under 35 U.S.C. §103(a) over Japanese Patent 2000-075509 (JP '509) as evidenced by ACS File Registry RN 26201-32-1 and JP '050, combined with JP '515, alone or in combination. Since claims 4, 7 and 8 depend from claims 1 and 5, respectively, claims 4, 7 and 8 are submitted to be patentable under 35 U.S.C. §103(a) over Japanese Patent 2000-075509 (JP '509) as evidenced by ACS File Registry RN 26201-32-1 and JP '050, combined with JP '515, alone or in combination, for at least the reasons that claims 1 and 5 are submitted to be patentable under 35 U.S.C. §103(a) over

Japanese Patent 2000-075509 (JP '509) as evidenced by ACS File Registry RN 26201-32-1 and JP '050, combined with JP '515, alone or in combination.

B. In the Office Action, at pages 22-26, numbered paragraph 18, claims 1-5, 7 and 8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Zhu (2003/00228534; hereafter, Zhu) as evidenced by applicants' admission in paragraph 0033 of the instant specification of the chemical identity of the material associated with the trademark MPCT 10 obtained from Mitsubishi Paper Mill Co., combined with Hamasaki (USPN 6,528,645; hereafter, Hamasaki) and JP '515. This rejection is traversed and reconsideration is requested.

Claim 2 has been cancelled. Hence, the rejection of claim 2 under 35 U.S.C. §103(a) as being unpatentable over Zhu (2003/00228534) combined with Hamasaki (USPN 6,528,645) and JP '515 is now moot.

Claims 1 and 5 have been amended to recite, in part: "wherein the single-layered electrophotographic photoreceptor exhibits an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, wherein $E_{1/2}$ is an exposure quantity necessary for discharging 1/2 of V_o , an initial potential."

It is respectfully submitted that Zhu and/or Hamasaki do not recite the compositional limitations of amended claims 1 and 5 wherein the use of the 1,1,2-trichloroethane aids the formation of the single-layered electrophotographic photoreceptor that exhibits an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$. Since a single-layered electrophotographic photoreceptor that exhibits an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$ has not previously been obtained, it is respectfully submitted that the single-layered electrophotographic photoreceptor that exhibits an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$ is non-obvious. In Ruiz and Foundation v. A.B. Chance Company, 69 USPQ2d 1690 (CAFC January 29, 2004), the court held that inventions must be viewed as a whole, not simply taken apart, piece by piece, and each piece then located in a granted patent:

In making the assessment of differences, section 103 specifically requires consideration of the claimed invention "as a whole." **Inventions typically are new combinations of existing principles or features.** Envtl. Designs, Ltd. v. Union Oil Co., 713 F.2d 693, 698 (Fed. Cir. 1983) (noting that "virtually all [inventions] are combinations of old elements."). **The "as a whole" instruction in title 35 prevents evaluation of the invention part by part. Without this important requirement, an obviousness assessment might break an invention into its component parts (A + B + C), then find a prior art reference containing A, another containing B, and another containing C, and on that basis alone declare the invention obvious. This form of hindsight reasoning, using the invention as a roadmap to find its prior art components, would discount the value of combining various existing features or principles in a new way to achieve a new result – often the very definition of invention.** (emphasis added)

In the present instance, even if combined, the cited art fails to provide a single-

layered electrophotographic photoreceptor that exhibits an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, as is recited in amended claims 1 and 5.

"Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight." (emphasis added) Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617. It is respectfully submitted that there is no teaching or suggestion of combining the references cited by the Examiner.

Although the Examiner submitted that it is well-known in the art that the alpha titanyl phthalocyanine has the chemical structure and the X-ray diffraction pattern as recited in the instant claims, claims 1 and 5 have been amended, and it is respectfully submitted that the single-layered electrophotographic photoreceptors of claims 1 and 5, as amended, are not well known or recited by the cited art. JP'515 does not meet the compositional limitations of amended claims 1 and 5, and since claims 7 and 8 depend from amended claims 1 and 5, respectively, JP '515 does not meet the compositional limitations of claims 7 and 8.

As noted by the Examiner on page 36 of the Office Action, the prior art does not teach a photoreceptor of the present invention which requires the use of 1,1,2-trichloroethane. As noted above, claims 1 and 5 provide a product "wherein the single-layered electrophotographic photoreceptor exhibits an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, wherein $E_{1/2}$ is an exposure quantity necessary for discharging 1/2 of V_o , an initial potential." It is respectfully submitted that neither Zhu (2003/00228534) nor Hamasaki (USPN 6,528,645) nor JP '515, alone or in combination provide a product exhibiting an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, wherein $E_{1/2}$ is an exposure quantity necessary for discharging 1/2 of V_o , an initial potential, as is provided by claims 1 and 5 of the present invention.

Hence, claims 1 and 5 are submitted to be patentable under 35 U.S.C. §103(a) over Zhu (2003/00228534), Hamasaki (USPN 6,528,645), and/or JP '515, alone or in combination. Since claims 4, 7 and 8 depend from claims 1 and 5, respectively, claims 4, 7 and 8 are submitted to be patentable under 35 U.S.C. §103(a) over Zhu (2003/00228534), Hamasaki (USPN 6,528,645), and/or JP '515, alone or in combination for at least the reasons that claims 1 and 5 are submitted to be patentable under 35 U.S.C. §103(a) over Zhu (2003/00228534), Hamasaki (USPN 6,528,645), and/or JP '515, alone or in combination.

C. In the Office Action, at pages 26-29, numbered paragraph 19, claims 1, 2, 4, 5, 7, and 8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Lin (2004/0096761; hereafter, Lin), as evidenced by ACS File Registry RN 26201-32-1 and Martin (USPN 5,350,844; hereafter, Martin). This rejection is traversed and reconsideration is requested.

Claim 2 has been cancelled. Hence, the rejection of claim 2 under 35 U.S.C. §103(a))

as being unpatentable over Lin (2004/0096761), as evidenced by ACS File Registry RN 26201-32-1 and Martin (USPN 5,350,844) is now moot.

As an initial point of clarification, Lin was first published on May 20, 2004, whereas the instant application was filed in the United States on June 24, 2003. As such, it is respectfully submitted that Lin does not qualify as prior art under 35 U.S.C. §102(b) or 35 U.S.C. §103(a). Additionally, the date of invention in the instant invention is at least July 10, 2002, which is the foreign priority date based upon the prior filing of the foreign counterpart to the instant application in the Korean Intellectual Property Office. A copy of the foreign counterpart was previously filed, as acknowledged by the Examiner in the Summary of the Office Action.

Further, enclosed is an English translation of Korean Application No. 2002-40105, along with a corresponding certification statement in compliance with 37 CFR 1.55(a)(4). As such, it is respectfully submitted that the applicants have established a date of invention of at least July 10, 2002. MPEP 210.15. Since this date of invention is prior to the publication of Lin on May 20, 2004, Lin does not qualify as prior art under 35 U.S.C. 102(a) as it was not "described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent." Therefore, it is respectfully requested that the Examiner reconsider and withdraw the rejection of claims 1, 2, 4 and 8 in view of Lin under 35 U.S.C. §103(a).

Claims 1 and 5 have been amended to recite, in part: "wherein the single-layered electrophotographic photoreceptor exhibits an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, wherein $E_{1/2}$ is an exposure quantity necessary for discharging 1/2 of V_o , an initial potential."

It is respectfully submitted that the single-layered electrophotographic photoreceptors of claims 1 and 5, as amended, are not well known or recited by the cited art.

That is, in the present instance, even if combined, **the cited art fails to provide a single-layered electrophotographic photoreceptor that exhibits an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, as is recited in amended claims 1 and 5.**

"Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight." (emphasis added) Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617. It is respectfully submitted that there is no teaching or suggestion of combining the references cited by the Examiner.

As noted by the Examiner on page 36 of the Office Action, the prior art does not teach a photoreceptor of the present invention which requires the use of 1,1,2-trichloroethane. As noted above, claims 1 and 5 provide a product "wherein the single-layered electrophotographic photoreceptor exhibits an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, wherein $E_{1/2}$ is an exposure quantity necessary for discharging 1/2 of V_o , an initial potential." It is respectfully

submitted that neither Lin (2004/0096761), as evidenced by ACS File Registry RN 26201-32-1 and Martin (USPN 5,350,844), alone or in combination, provide a product exhibiting an $E_{1/2}$ of about 0.16 to about 0.22 $\mu\text{Joules}/\text{cm}^2$, wherein $E_{1/2}$ is an exposure quantity necessary for discharging 1/2 of V_o , an initial potential, as is provided by claims 1 and 5 of the present invention.

Hence, claims 1 and 5 are submitted to be patentable under 35 U.S.C. §103(a) over Lin (2004/0096761) (Lin is not available as prior art), as evidenced by ACS File Registry RN 26201-32-1 and Martin (USPN 5,350,844), alone or in combination. Since claims 4, 7 and 8 depend from claims 1 and 5, respectively, claims 4, 7 and 8 are submitted to be patentable under 35 U.S.C. §103(a) over Lin (2004/0096761) (Lin is not available as prior art), as evidenced by ACS File Registry RN 26201-32-1 and Martin (USPN 5,350,844), alone or in combination, for at least the reasons that claims 1 and 5 are submitted to be patentable under 35 U.S.C. §103(a) over Lin (2004/0096761) (Lin is not available as prior art), as evidenced by ACS File Registry RN 26201-32-1 and Martin (USPN 5,350,844), alone or in combination.

DOUBLE PATENTING:

In the Office Action, at pages 32-35, numbered paragraph 21, claims 1 and 2 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3-7, 9-12, 15, and 16 of copending Application No. 10/459,720 (hereafter Application '720) in view of Hamasaki. This rejection is traversed and reconsideration is requested.

Claim 2 has been cancelled without prejudice or disclaimer. Thus, the provisional rejection of claim 2 under the judicially created doctrine of obviousness-type double patenting is now moot.

As noted above, amended claim 1 of the present invention is submitted to be different from the invention of Hamasaki. In addition, it is respectfully submitted that copending Application No. 10/459,720 has been abandoned for failure to respond to the office action (on October 12, 2005).

Hence, it is respectfully submitted that the provisional rejection of claim 1 of the present application under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3-7, 9-12, 15, and 16 of copending Application No. 10/459,720 (hereafter Application '720) in view of Hamasaki is now moot.

ALLOWABLE SUBJECT MATTER:

In the Office Action, at pages 35-36, numbered paragraph 22, claims 9, 11, 12, 15, and 23 were allowed over the prior art of record.

Applicants thank the Examiner for her careful consideration and allowance of claims 9,

11, 12, 15 and 23.

Claim 24 would be allowable if rewritten to overcome the objections set forth in paragraph 11 above.

Claim 24 has been amended to correct the spelling of "dicyanomethylene" to --- dicyanomethylene---. Thus, it is respectfully submitted that claim 24 is now in form for allowance.

CONCLUSION:

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited. At a minimum, this Amendment should be entered at least for purposes of Appeal as it either clarifies and/or narrows the issues for consideration by the Board.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited and possibly concluded by the Examiner contacting the undersigned attorney for a telephone interview to discuss any such remaining issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: January 11, 2006

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